AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Canceled)

2. (Currently Amended) A compound of formula (I):

D-Y-T (I)

wherein D is a drug containing at least one moiety selected from the group consisting of hydroxyl, thiol, NH, carboxylic acid or salt thereof, phosphonic acid or salt thereof and phosphoric acid or salt thereof and having therapeutic or prophylactic activity when delivered to the systemic circulation of an ~~said~~ animal;

T is a moiety selected to permit the compound of formula (I) or a active metabolite thereof to be translocated across the intestinal wall of an animal and participate in the enterohepatic circulation in said animal, wherein T is selected from the group consisting of members of the family of sodium/bile acid cotransporters (family SLC10), members of the family of organic cation/anion transporters (SLC22), members of the organic ion/prostaglandin transporter family (SLC21), members of the proton/moncarboxylate cotransporter family (SLC16), members of the proton/oligopeptide cotransporter family (SLC15), members of the peptide/histidine transporter family, members of the sodium/nucleoside cotransporter family (SLC28), the facilitated nucleoside transporter family, members of the D2/NBAT and 42F family (SLC3), members of the sodium dicarboxylate/sulfate cotransporter family (SLC13), folate

transporter family (SLC19), sodium/ascorbate transporter family (JC7095), sodium/glucose cotransporter family (SLC5), members of the facilitated glucose transporter family (SLC2), members of the ATP binding cassette transporter family (ABC transporters), members of the long chain fatty acid transporter family (SLC27), members of the amino acid permease transporter family (SLC7), members of the urea transporter family (SLC14), microsomal epoxide hydrolase (mEH)(AAF87738), vesicular/transcytosis transport systems, and intracellular binding proteins; and

Y is a cleavable linker covalently connecting D to T wherein Y is selected such that a portion of the linker is cleaved to release drug D or active metabolite thereof during each cycle through the enterohepatic circulation whereupon sustained release of drug D in said animal is achieved and wherein Y is represented by the formula -X-[Y*]-Z- where

X is the linker chemistry for attachment to the drug and X is selected from the group consisting of -OC(O)-, -OC(O)NR^7-, -OC(O)$OCR^{11}R^{12}O$-, -OC(O)$OCR^{11}R^{12}OC(O)$-, -OC(O)$OCR^{11}R^{12}OC(O)O$-, -OC(O)$OCR^{11}R^{12}OC(O)NR^7$-, -SC(O)-, -$NR^7C(O)O$-, -$NR^7C(O)$-, -$NR^7C(O)OCR^{11}R^{12}OC(O)$-, -$NR^7C(O)OCR^{11}R^{12}OC(O)O$-, -$NR^7CH_2NR^7C(O)$-, -C(O)O-, -C(O)S-, -C(O)NR^7-, -C(O)$NR^7C(O)R^8$-, -C(O)$OCR^{11}R^{12}O$-, -C(O)$OCR^{11}R^{12}OC(O)$-, -C(O)$OCR^{11}R^{12}OC(O)O$-, -C(O)$OCH_2C(O)NR^7$-, -C(O)$OCH_2CH_2NR^7C(O)$-, -C(O)$OCH_2NR^7C(O)$-, -C(O)$OCR^{11}R^{12}OC(O)NR^7$-, -P(O)$(OR^6)O$-, -P(O)$(OR^6)NR^7$-, -P(O)$(OR^6)OCR^{11}R^{12}O$-, -P(O)$(OR^6)OCR^{11}R^{12}OC(O)$-, -P(O)$(OR^6)OCR^{11}R^{12}OC(O)O$-, -P(O)$(OR^6)OCR^{11}R^{12}OC(O)NR^7$-, with the underlined atom being derived from the hydroxyl, thiol, NH, carboxylic acid (or salt thereof), phosphonic acid (or salt thereof) or phosphoric acid (or salt thereof) moiety of the drug;

wherein R^6 is selected from the group consisting of alkyl, substituted alkyl, aryl and substituted aryl; each R^7 is independently hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl,

cycloalkyl, substituted cycloalkyl, heterocycle, substituted heterocycle, aryl, substituted aryl, heteroaryl, substituted heteroaryl; R^{11} and R^{12} are independently hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, cycloalkyl, substituted cycloalkyl, heterocycle, substituted heterocycle, aryl, substituted aryl, heteroaryl, substituted heteroaryl or R^{11} and R^{12} together with the atoms to which they are attached form a cycloalkyl, substituted cycloalkyl, heterocycle or substituted heterocyclic ring;

Z is the linker chemistry for attachment to T and Z is selected from the group consisting of a bond, –O-, -S-, -C(O)O-, -OC(O)O-, -NR^7C(O)O-, -OC(O)NR^7-, -OP(O)(OR^6)O-, -P(O)(OR^6)O-, - NR^7P(O)(OR^6)O-, -C(O)NR^7-, -NR^7C(O)NR^7-, -NR^7C(O)NR^7-, -$S(O)_2NR^7$-, -S(O)-, -$S(O)_2$-, -C(O)S-, -ON=, -C(O)ON=, -NR^7C(O)ON=, -C(O)O$CR^{11}R^{12}$ON=, and a C=C linkage, wherein R^6- R^{12} are defined as above;

Y* is a bond or a bivalent hydrocarbyl radical of 1 to 18 atoms having at least one alkylene, alkenylene or alkynylene group, with said at least one alkylene, alkenylene or alkynylene group optionally replaced with –O-, -S-, -NR^7-, -C(O)-, -C(S)-, -OC(O)-, -C(O)O, -SC(O)-, -C(O)S-, -SC(S)-, -C(S)S-, -C(O)NR^7-, -NR^7C(O)-, arylene, substituted arylene, cycloalkylene, substituted cycloalkylene, cycloalkenylene, substituted cycloalkenylene, bivalent heterocyclic group or substituted bivalent heterocyclic group, wherein R^7 is defined as above.

3 – 42. (Canceled)

43. (New) A compound according to claim 2, wherein Y* is represented by the formula:

$$(R^3)_f(R^4)_g(R^5)_h$$

where each of R^3, R^4 and R^5 are independently selected from the group consisting of alkylene, substituted alkylene, alkenylene, substituted alkenylene, alkynylene, substituted alkynylene, cycloalkylene, substituted

cycloalkylene, cycloalkenylene, substituted cycloalkenylene, arylene, substituted arylene, heteroarylene, substituted heteroarylene, heterocyclene and substituted heterocyclene; and each of f, g and h are independently an integer from 0 to 3.

44. (New) A compound according to claim 2, wherein Y* is alkylene, alkenylene or alkynylene.

45. (New) A compound according to claim 2, wherein D is a drug containing a carboxyl group.

46. (New) A compound according to claim 2, wherein D is a drug containing an amine group.

47. (New) A compound according to claim 2, wherein D is a drug containing a hydroxy group.

48. (New) A compound according to claim 2, wherein T is selected from the group consisting of Na-taurocholate cotranporting protein (NCTP or LBAT) (NM_003049), apical bile acid transporter (IBAT or ASBT) (NM_000452), and h-P3 (XM 013054).

49. (New) A compound according to claim 2, wherein T is selected from the group consisting of OCT1 (NM_003057), OCT2 (NM_003058), OCT3 (AF078749), OCTN1 (NM_003059), OCTN2 (NM_003060), ORCTL2 (AF037064), ORCTL3 (NM_004256), ORCTL4 (NM_004803), BOCT (NM-020372), OAT-1 (NM_004790), OAT-2 (NM_006672), OAT-3 (NM_004254), OAT-4 (AB026116), OAT-7 (NM- 006672), and OAT-8 (NM-019844).

50. (New) A compound according to claim 2, wherein T is selected from the group consisting of OATP-A (OATP)(NM_005075), OATP-B (NM_007256), OATP-C (LST-1)(NM_006446), OATP-D (NM_013272), PGT (NM_005630), OATP-F (NM_017435), OATP-G (AX074150), and OATP-H (AF205075).

51. (New) A compound according to claim 2, wherein T is selected from the group consisting of MCT1 (AAH01013), MCT2(XP_013099), MCT3 (XP_005733), MCT4 (XP_002144), MCT5 (NP_004686), MCT6 (XP_017131), MCT7 (XP_012127), MCT8 (XP_009979), MCT9, and MCT10.

52. (New) A compound according to claim 2, wherein T is selected from the group consisting of PEPT1 (XM_007063), PEPT2 (XM_002922), PEPT3 (AV662097), PHT1 (W53019), and PHT2 (AB020598).

53. (New) A compound according to claim 2, wherein T is selected from the group consisting of CNT-1 (NM_004213), CNT-2 (NM_004212), CNT-3 (XP_011759), ENT-1 (HSU81375), ENT-2 (AF029385), and ENT-3 (AAK00958).

54. (New) A compound according to claim 2, wherein T is selected from the group consisting of LAT1 (AF104032), LAT2 (AF135828), LAT3 (AF135829), LAT4 (NM_004173), Y+LAT1 (D87432), Y+LAT2 (NM_003982), HBAT (AF141289), HrBAT (L11696), NAAT-B (U53347), h4F2C (AB018010), ATBO+ (AF151978), NADC1 (NM_003984), NADC2 (NM_022444), and NADC3 (AF154121).

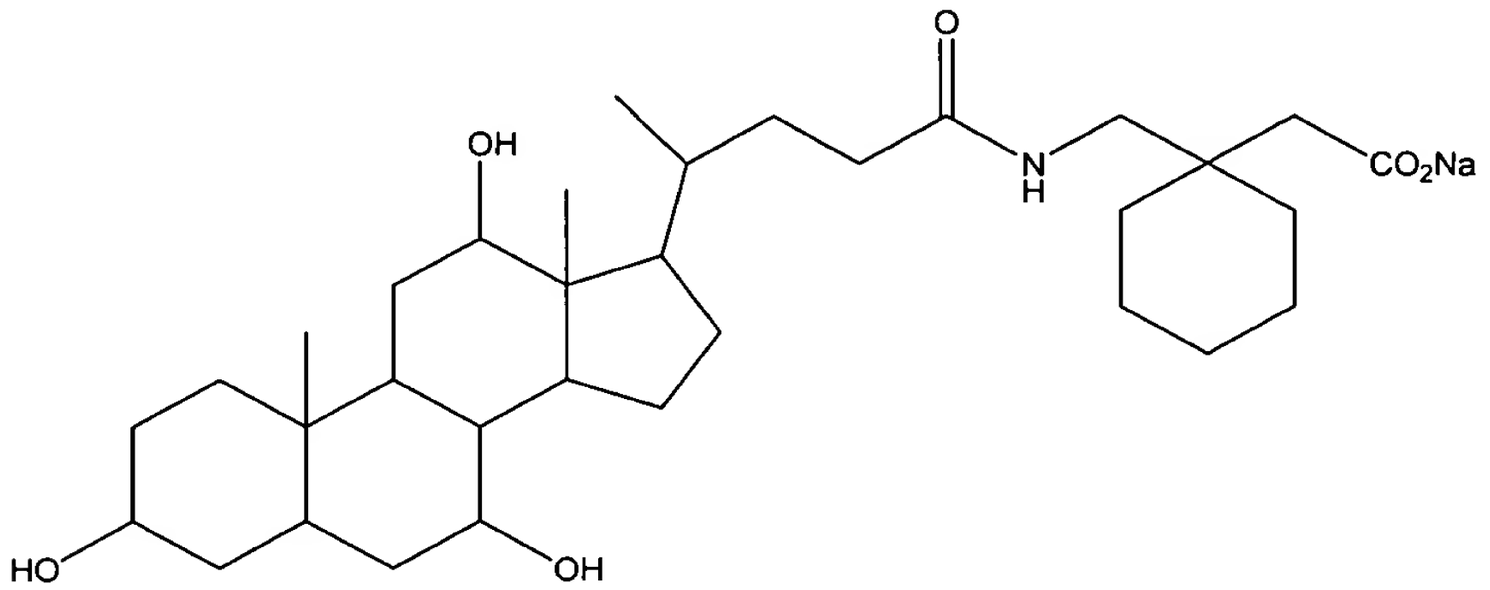
55. (New) A compound according to claim 2, wherein T is selected from the group consisting of reduced folate transporters (RFC)(P41440), sodium/ascorbate transporter family (JC7095), sodium-dependent glucose transporter (SGLT-1), and sodium-dependent multivitamin transporter (SMVT)(XP_002430).

56. (New) A compound according to claim 2, wherein T is selected from the group consisting of cholesterol transporter ABCA1 (XM005567), ABCA2 (AF178941), ABCA3 (XM007924), ABCA4 (XM001290), ABCA5 (AC005495), ABCA6 (AC005495), ABCA7 (XM00942612), ABCA8 (NM007168), ABCA9 (AC005922), ABCA10 (AC005495), ABCA11, ABCA12, ABCA13, ABCA14, multidrug resistance (MDR) /TAP subfamily (B) ABCB1 (MDR1, PgP)(XM004598), ABCB2 (XM004227), ABCB3 (XM004224), ABCB4 (MDR2/3)(NM000443), ABCB5 (AC002486), ABCB6 (XM002594), ABCB7 (NM004299), ABCB8 (XM004683), ABCB9 (NM019625), ABCB10 (XM001871), ABCB11 (Bile salt export pump (BSEP or SGPG)(XM002644); CFTR/multidrug resistance –associated (MRP) subfamily (C) ABCC1 (MRP1)(NM004996), ABCC2 (MRP2 or cMOAT) (NM000392), ABCC3 (MRP3)(NM003786), ABCC4 (MRP4)(NM005845), ABCC5 (MRP5)(NM005688), ABCC6 (MRP6) (NM001171), ABCC7 (CFTR)(NM000492), BCC8 (NM000352), ABCC9 (NM005691), ABCC10 (AK000002), ABCC11, ABCC12, ABCC13.

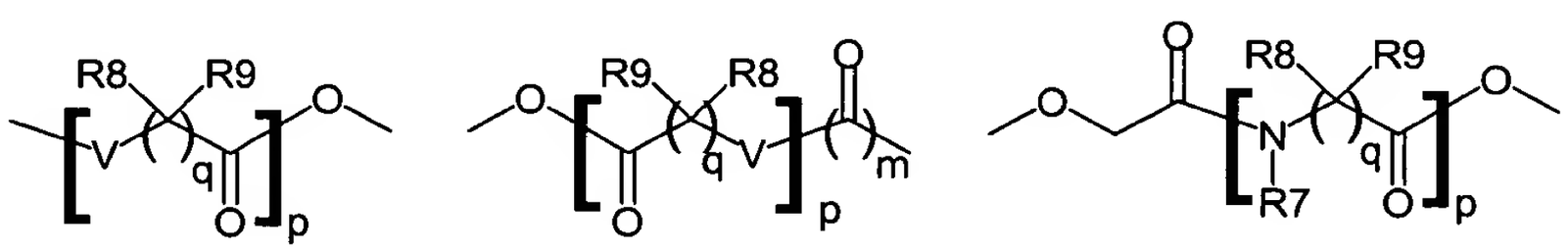
57. (New) A compound according to claim 2, wherein T is selected from the group consisting of polyamine transporters, microsomal epoxide hydrolase (mEH)(AAF87738), epoxide receptor-mediated vitamin B12 transporter, receptor-mediated folate transporter, intestinal bile acid binding protein (I-BABP), and hepatocyte bile acid binding protein (HBAB).

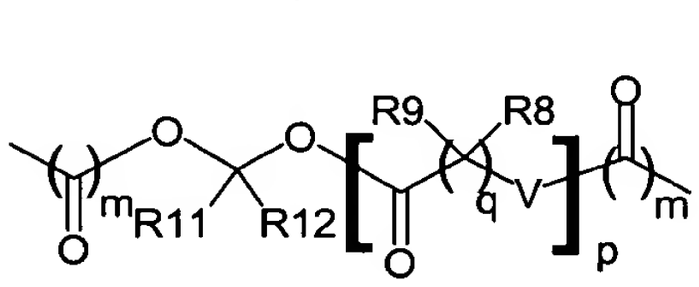
58. (New) A compound according to claim 2, wherein T is a bile acid transporter protein.

59. (New) A compound according to claim 2 of the following formula:

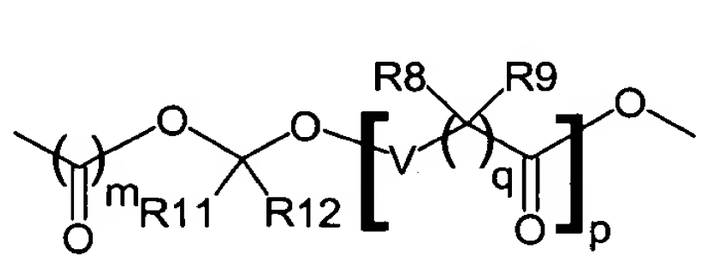


60. (New) A compound according to claim 2, wherein Y is selected from the group consisting of





and



wherein

V is selected from the group consisting of NR^7, O, S and CR^8R^9;

each m is independently 0 or 1;

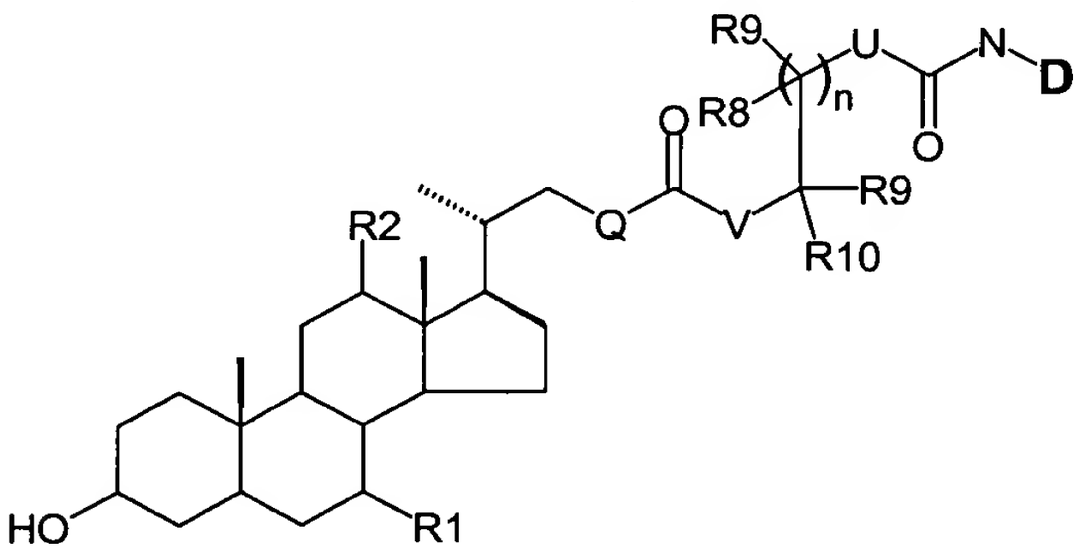
p is 0, 1, 2, 3 or 4;

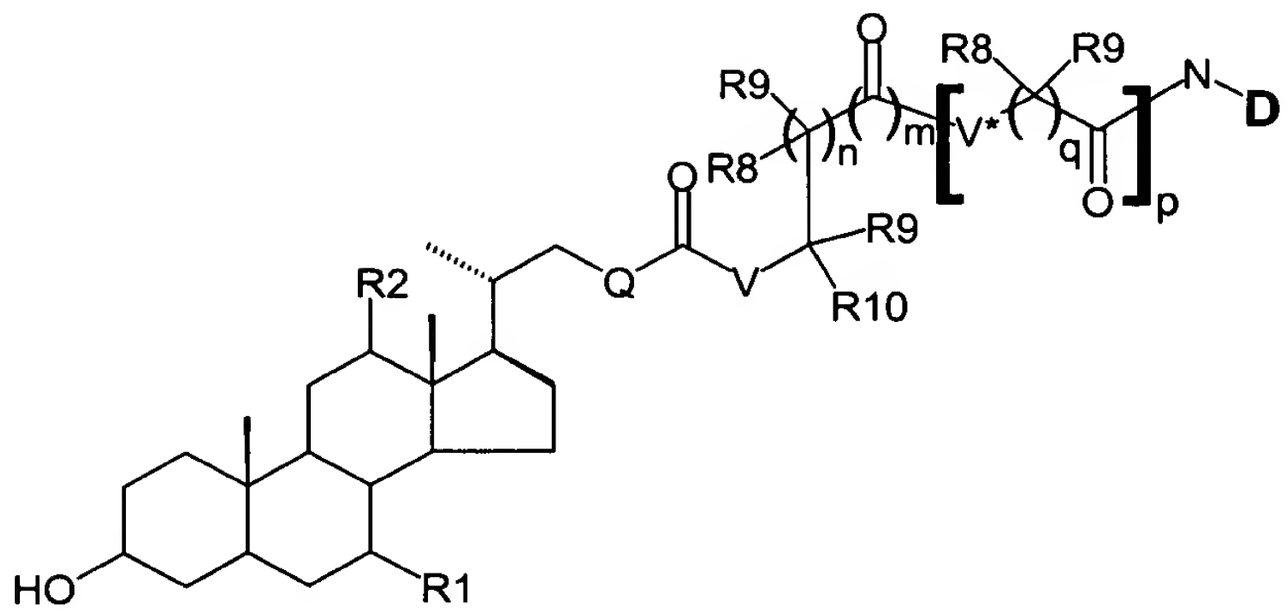
each q is 1, 2, 3, 4, 5 or 6;

each R^7, R^8 and R^9 is independently hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, cycloalkyl, substituted cycloalkyl, heterocycle, substituted heterocycle, aryl, substituted aryl, heteroaryl, substituted heteroaryl or R^8 and R^9 together with the atoms to which they are attached form a cycloalkyl, substituted cycloalkyl, heterocycle or substituted heterocyclic ring, or when R^7 and R^9 are present and attached to adjacent atoms, then R^7 and R^9 together with the atoms to which they are attached form a cycloalkyl, substituted cycloalkyl, heterocycle or substituted heterocyclic ring; and

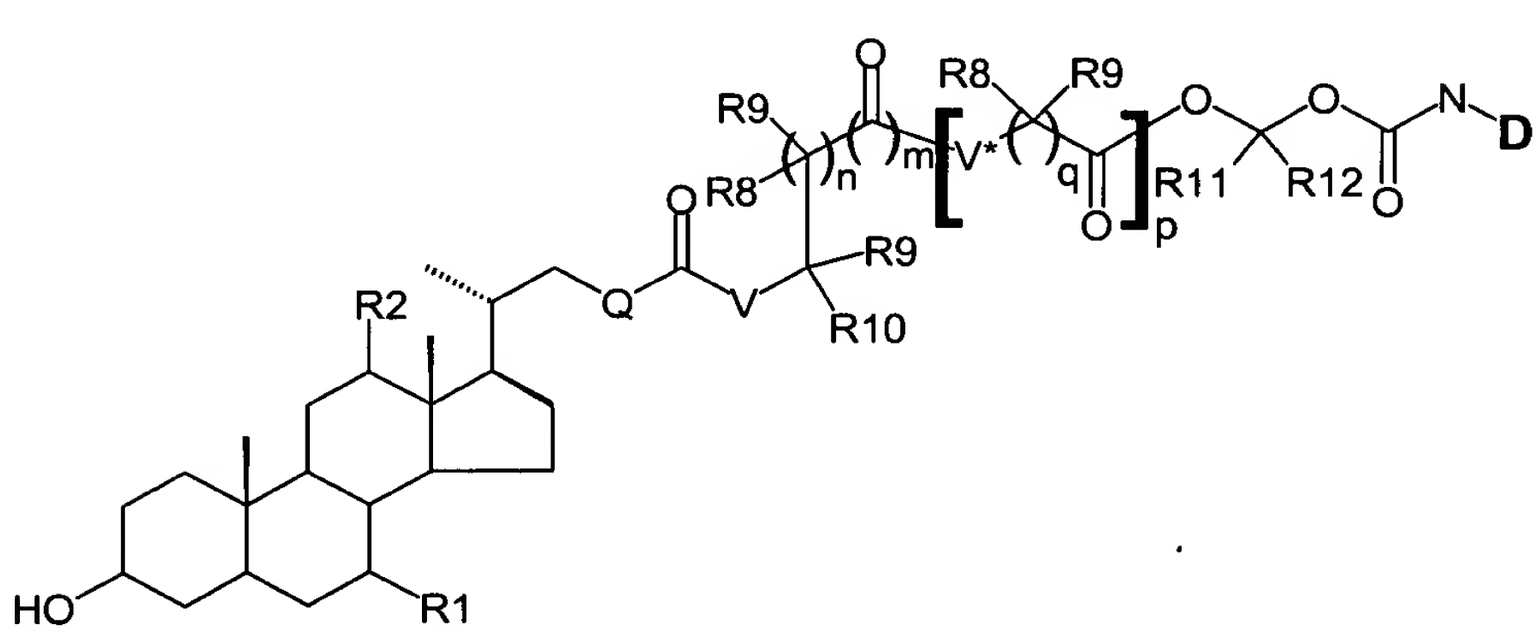
R^{11} and R^{12} are independently hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, cycloalkyl, substituted cycloalkyl, heterocycle, substituted heterocycle, aryl, substituted aryl, heteroaryl, substituted heteroaryl or R^{11} and R^{12} together with the atoms to which they are attached form a cycloalkyl, substituted cycloalkyl, heterocycle or substituted heterocyclic ring.

61. (New) A compound according to claim 2 of the following formula





or



wherein D is a drug containing NH;

Q is CH_2 or O;

V and V* are independently NR^7, O, S or CR^8R^9;

U is NR^7, O, S; R^{10} is R^8 or $(CR^8R^9)_rZ'$;

Z' is selected from the group consisting of CO_2H, SO_3H, OSO_3H, SO_2H, $P(O)(OR^6)(OH)$, $OP(O)(OR^6)(OH)$ and pharmaceutically acceptable salts thereof;

m is 0 or 1;

n is 0, 1, 2, 3 or 4;

p is 0, 1, 2, 3 or 4, providing that when m is 0 p is not 0; each q is 1, 2, 3, 4, 5 or 6;

r is 0 or 1;

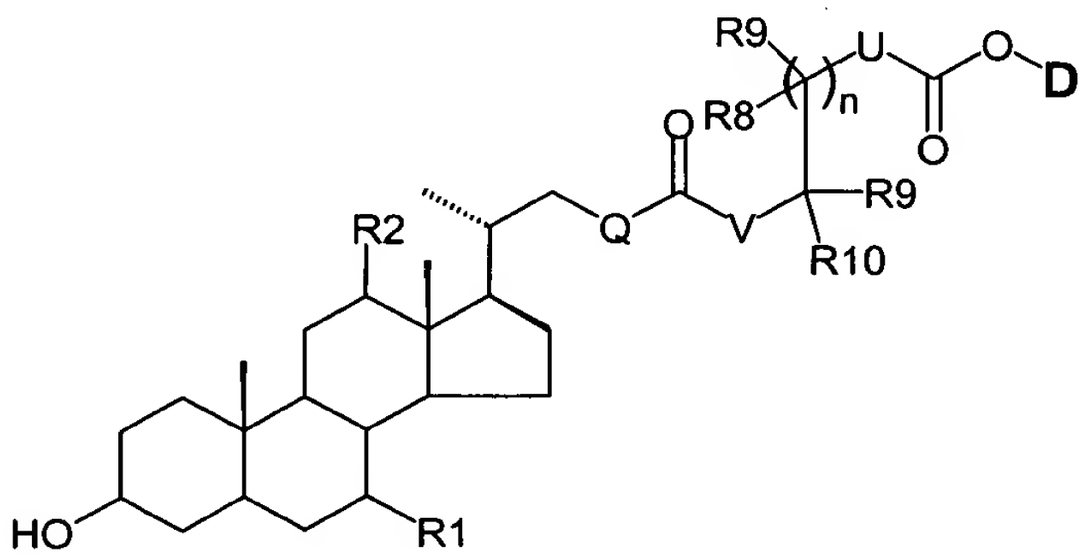
R^1 is selected from the group consisting of hydrogen and OH; R^2 is selected from the group consisting of hydrogen and OH;

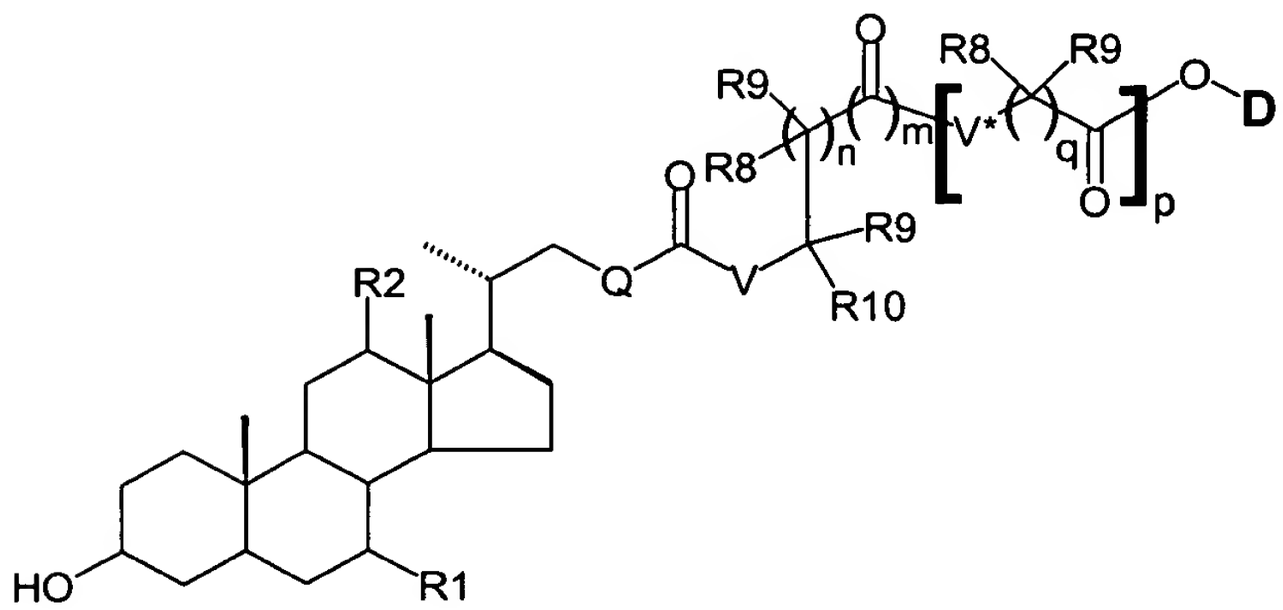
R^6 is selected from the group consisting of alkyl, substituted alkyl, aryl and substituted aryl;

each R^7, R^8 and R^9 is independently hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, cycloalkyl, substituted cycloalkyl, heterocycle, substituted heterocycle, aryl, substituted aryl, heteroaryl, substituted heteroaryl or R^8 and R^9 together with the atoms to which they are attached form a cycloalkyl, substituted cycloalkyl, heterocycle or substituted heterocyclic ring, or when R^7 and R^9 are present and attached to adjacent atoms, then R^7 and R^9 together with the atoms to which they are attached form a cycloalkyl, substituted cycloalkyl, heterocycle or substituted heterocyclic ring; and

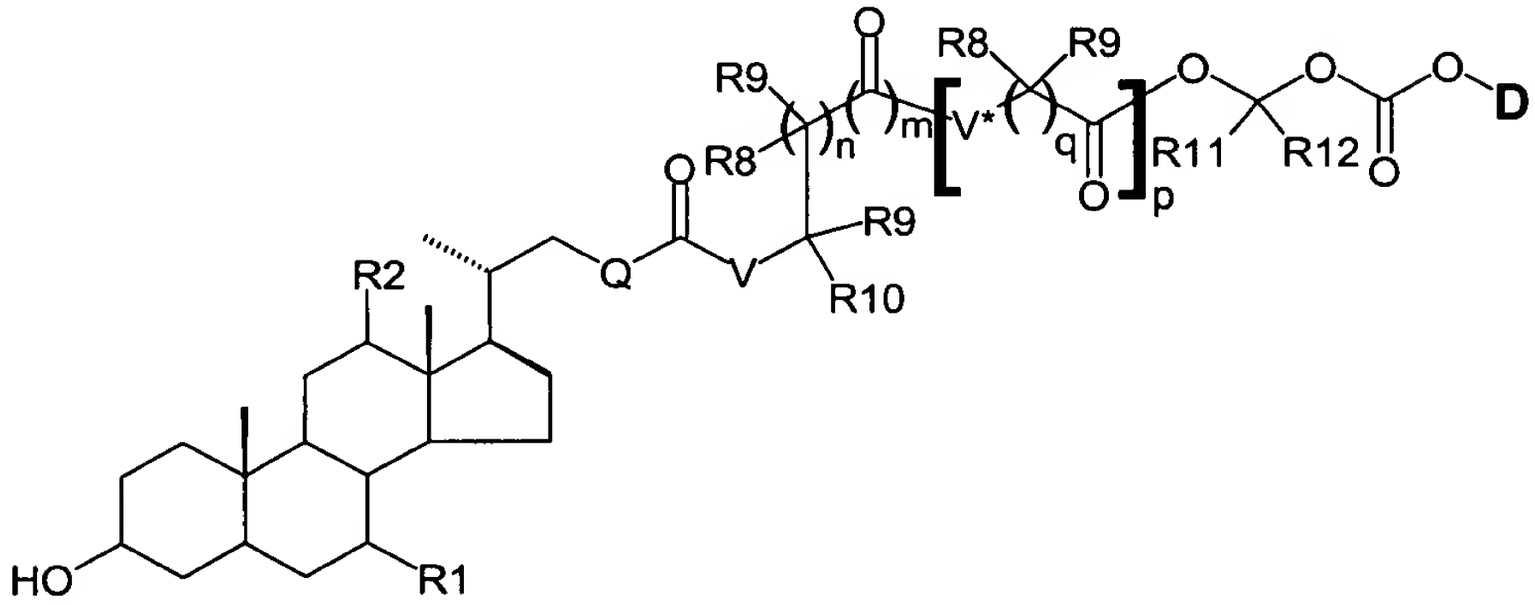
R^{11} and R^{12} are independently hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, cycloalkyl, substituted cycloalkyl, heterocycle, substituted heterocycle, aryl, substituted aryl, heteroaryl, substituted heteroaryl or R^{11} and R^{12} together with the atoms to which they are attached form a cycloalkyl, substituted cycloalkyl, heterocycle or substituted heterocyclic ring.

62. (New) A compound according to claim 2 of the following formula





or



wherein

D is a drug containing hydroxyl;

Q is CH_2 or O;

V and V* are independently NR^7, O, S or CR^8R^9;

U is NR^7, O, S; R^{10} is R^8 or $(CR^8R^9)_rZ'$; Z' is selected from the group consisting of CO_2H, SO_3H, OSO_3H, SO_2H, $P(O)(OR^6)(OH)$, $OP(O)(OR^6)(OH)$ and pharmaceutically acceptable salts thereof;

m is 0 or 1;

n is 0, 1, 2, 3 or 4;

p is 0, 1, 2, 3 or 4, providing that when m is 0 p is not 0; each q is 1, 2, 3, 4, 5 or 6; r is 0 or 1;

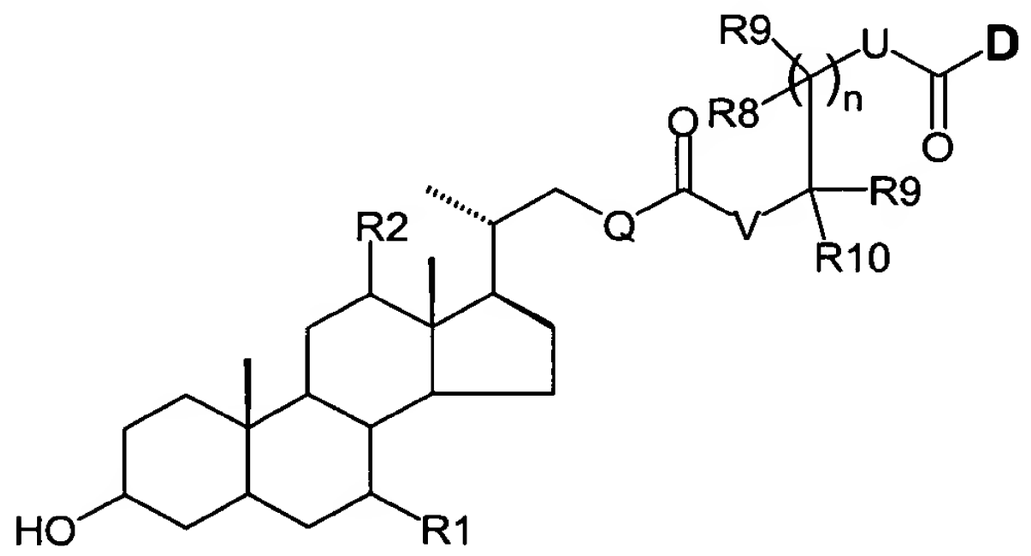
R^1 is selected from the group consisting of hydrogen and OH; R^2 is selected from the group consisting of hydrogen and OH;

R^6 is selected from the group consisting of alkyl, substituted alkyl, aryl and substituted aryl;

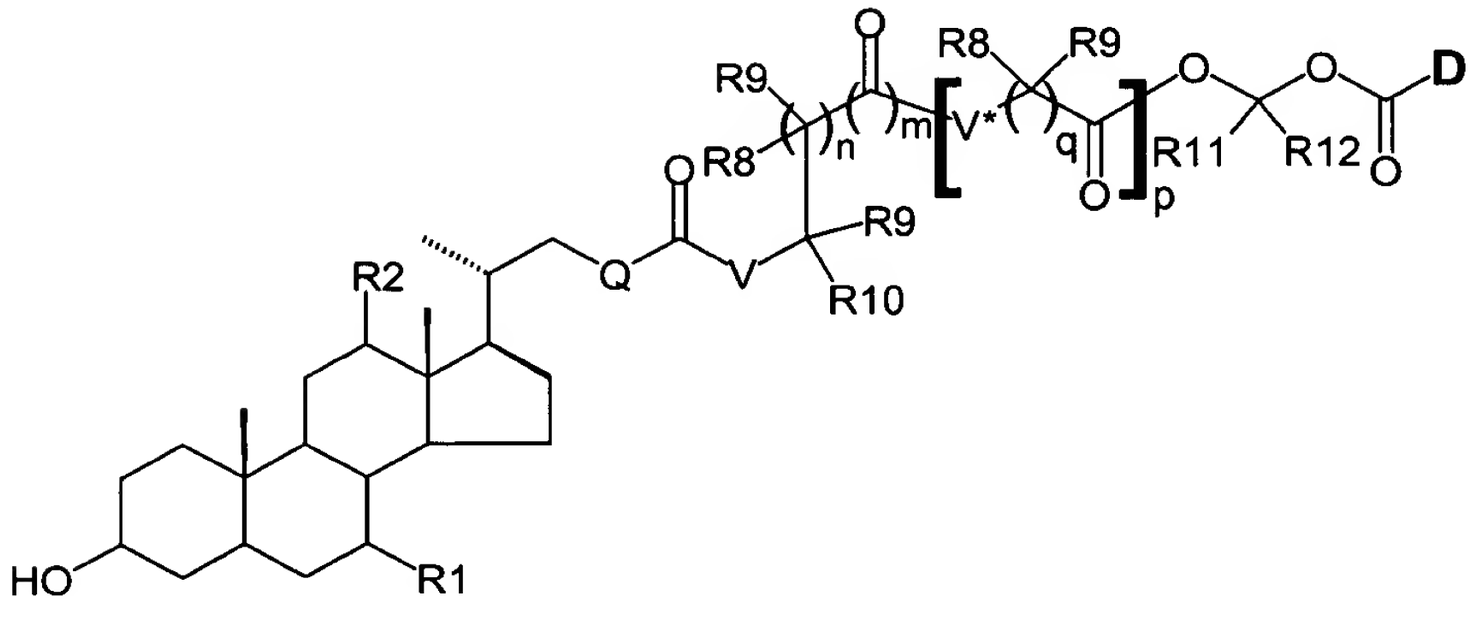
each R^7, R^8 and R^9 is independently hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, cycloalkyl, substituted cycloalkyl, heterocycle, substituted heterocycle, aryl, substituted aryl, heteroaryl, substituted heteroaryl or R^8 and R^9 together with the atoms to which they are attached form a cycloalkyl, substituted cycloalkyl, heterocycle or substituted heterocyclic ring, or when R^7 and R^9 are present and attached to adjacent atoms, then R^7 and R^9 together with the atoms to which they are attached form a cycloalkyl, substituted cycloalkyl, heterocycle or substituted heterocyclic ring; and

R^{11} and R^{12} are independently hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, cycloalkyl, substituted cycloalkyl, heterocycle, substituted heterocycle, aryl, substituted aryl, heteroaryl, substituted heteroaryl or R^{11} and R^{12} together with the atoms to which they are attached form a cycloalkyl, substituted cycloalkyl, heterocycle or substituted heterocyclic ring.

63. (New) A compound according to claim 2 of the following formula



or



wherein D is a drug containing carboxylic acid or salt thereof;

Q is CH_2 or O;

V and V* are independently NR^7, O, S or CR^8R^9;

U is NR^7, O, S; R^{10} is R^8 or $(CR^8R^9)_rZ'$;

Z' is selected from the group consisting of CO_2H, SO_3H, OSO_3H, SO_2H, $P(O)(OR^6)(OH)$, $OP(O)(OR^6)(OH)$ and pharmaceutically acceptable salts thereof;

m is 0 or 1;

n is 0, 1, 2, 3 or 4;

p is 0, 1, 2, 3 or 4;

each q is 1, 2, 3, 4, 5 or 6;

r is 0 or 1;

R^1 is selected from the group consisting of hydrogen and OH;

R^2 is selected from the group consisting of hydrogen and OH;

R^6 is selected from the group consisting of alkyl, substituted alkyl, aryl and substituted aryl;

each R^7, R^8 and R^9 is independently hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, cycloalkyl, substituted cycloalkyl, heterocycle, substituted heterocycle, aryl, substituted aryl, heteroaryl, substituted heteroaryl or R^8 and R^9 together with the atoms to which they are attached form a cycloalkyl, substituted cycloalkyl, heterocycle or substituted heterocyclic ring, or when R^7 and R^9 are present and attached to adjacent atoms,

then R^7 and R^9 together with the atoms to which they are attached form a cycloalkyl, substituted cycloalkyl, heterocycle or substituted heterocyclic ring; and

R^{11} and R^{12} are independently hydrogen, alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, cycloalkyl, substituted cycloalkyl, heterocycle, substituted heterocycle, aryl, substituted aryl, heteroaryl, substituted heteroaryl or R^{11} and R^{12} together with the atoms to which they are attached form a cycloalkyl, substituted cycloalkyl, heterocycle or substituted heterocyclic ring.